

## Statistical Analysis Plan

**Title: Check It! 2.0: Positive Psychology Intervention for Adolescents with T1D**

**NCT Number: NCT02984709**

**Date: 10/12/2016**

Data were graphically examined to check for outliers as well as distribution for continuous outcomes. Identified outliers were manually checked and corrected if needed. For the outcomes that were generated from questionnaire items such as SCI, DFC and PedsQL, when subjects had only a few missing items, the missing item values were imputed using the values with highest frequency, and the imputed items were used to calculate the final score for the subject. As a sensitivity analysis, we performed multiple imputations to examine sensitivity to missing data.

Baseline differences in demographic and clinical variables between the Education and PA groups were compared using Chi-square test for categorical variables and Wilcoxon rank sum test for continuous variables. The primary analyses were performed using multiple linear regressions with adjustment of covariates and PA group as the main effect. The following *a priori* selected covariates were adjusted in each analysis: age, sex, baseline depressive symptoms, and baseline measurement for each outcome. All analyses were performed using the programming language R version 3.3.0